## REMARKS

Reconsideration of this application, as amended, is respectfully requested.

In the Office Action, the Examiner listed nine claim objections, eight of which are directed to the use of the British spelling for the word "digitizing" or "synchronization". The changes suggested by the Examiner to claims 6, 9, 16 and 19 to correct the spelling have been made. In addition, the Examiner objected to claim 9, asserting it was unclear as to whether the sequences included one or more of the identified features. Claim 9 has been amended to specify that the sequences include "one or more of" training sequences, synchronization signals, frequency corrections bursts and dummy bursts. It is respectfully requested that the objections to the claims be withdrawn.

In the Office Action, the Examiner indicated that claims 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicant appreciates the indication that claims 11-13 contain allowable subject matter and accordingly, new claims 20-22 are submitted herewith in order to place the subject matter of claim 11 in independent form. Therefore, it is submitted that claims 20-22 are in condition for allowance.

In the Office Action, the Examiner rejected claims 1-4, 14 and 17 under 35 U.S.C. § 103 (a) as being unpatentable over Mege et al. (U.S. 2001/0005406) in view of Brunner et al. (U.S. 6,301,470). It is requested that this rejection be reconsidered in view of the amendments and remarks herein.

The present invention is directed to a method of regenerating a remotely transmitted signal comprising a symbol stream modulated onto a carrier in accordance with a predetermined standard, the method including the steps of receiving the remotely transmitted signal having

known characteristics; determining frame timing of the received signal; identifying the locations of sequences within the signal from the frame timing; identifying the structure of the sequences; estimating phase shift values and mean beat frequency at the locations of the sequences; demodulating the symbol stream using structure of the sequences; and remodulating the symbol stream using the phase shift values and the mean beat frequency. As noted on page 13, lines 17-21 and page 14, lines 5-8, by remodulating the demodulated GSM signals and reapplying the mean beat frequency and residual phase shift corrections, a high quality regenerated replica of the signal from the transmitter is obtained.

Mege et al. discloses a method of generating a remotely transmitted signal, wherein the receiver has a radio stage which generates a complex baseband signal from the radio signal picked up by an antenna. Mege et al. uses the presence of synchronization sequences in the transmitted signal to extract time synchronization symbols and the time synchronization information may indicate the shift for which the normalized correlation function is maximum. The Examiner acknowledges that Mege et al. does not disclose step g) of claim 1 of remodulating the symbol stream using the phase shift values. The Examiner alleges that Brunner et al. teaches step g).

However, step g) as amended recites that the symbol stream is remodulated using the phase shift values and the mean beat frequency. Support for this amendment may be found in the specification, for example, on page 14, lines 1, 2, wherein it states "remodulator 50 accesses the database 34 and reapplies the residual phase shift 24A and mean beat frequency estimate 30A." By remodulating the demodulated GSM signals and reapplying the mean beat frequency and

residual phase shift corrections, a high quality regenerated replica of the signal from the transmitter is obtained.

Brunner et al. does not disclose using both the phase shift values and the mean beat frequency for remodulation. Brunner et al. discloses using a scaling factor from a cross-correlation detector for remodulation. There is no teaching of what the scaling factor (also called a cross-correlation factor x) is comprised of, but there is no teaching that this factor is comprised of the mean beat frequency and the phase shift values.

Thus, the hypothetical combination of Mege et al. and Brunner et al. does not teach, suggest or otherwise render obvious claim 1 as amended.

In the Office Action, the Examiner also rejected claims 5-8, 15, 16, 18 under 35 U.S.C. § 103 as being unpatentable over Mege et al. and Brunner et al. and further in view of Raith et al. (U.S. 4,947,409). In addition, the Examiner rejected claims 9 and 10 under 35 U.S.C. § 103 as being unpatentable over Mege et al. and Brunner et al. and further in view of Burton (U.S. Patent 6,885,693). However, in view of the fact that claim 1 as amended is considered to contain allowable subject matter, these rejections are considered overcome as these claims all depend from claim 1.

It is noted that the Examiner rejected claim 4 on the grounds of being obvious over Mege et al. in view of Brunner et al. The passage relied upon by the Examiner to teach the feature of claim 4 is alleged to be in column 5, lines 40-47 of Brunner et al.

The relevant passage states that "the wave fronts ... are fed to a data detector ... which detects and recovers the data ... represented by these wave fronts ... the data is modulated into

radio frequency signals in accordance with the radio communications transmission process determined in accordance with the GSM system ... the data detector ... embodies viterbi equalizer ... and a data decoder".

It is clear from this passage that there is no disclosure of *comparing demodulated symbols with known symbols to provide an estimate of the symbol error rate* as is recited in claim 4. Therefore, claim 4 is non-obvious over Mege et al. in view of Brunner et al.

In view of the above, it is respectfully submitted that all of the claims in the application contain patentable subject matter and a Notice of Allowance is respectfully solicited.

Respectfully submitted,

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